

Please cancel pending Claims 21-22, 32-37 and 42-47 without prejudice.

Please add new Claims 48-62 as set forth below:

- C11
48. (New) A method of producing an immune response in an animal comprising, administering to said animal, an effective amount of an antigenic composition, comprising an adjuvant and an isolated *Chlamydia* species high molecular weight (HMW) protein, said HMW protein encoded by a nucleic acid comprising nucleotide residues 466 to 3417 of SEQ ID NO.: 1, residues 82 to 3036 of SEQ ID NO.: 23 or residues 85 to 3039 of SEQ ID NO.: 24, wherein the *Chlamydia* species is *Chlamydia trachomatis*, *Chlamydia pecorum*, or *Chlamydia pneumoniae*.
49. (New) The method of claim 48, wherein said HMW protein comprises an amino acid sequence of amino acid residues 29 to 1012 of SEQ ID NO.: 2, residues 29 to 1013 of SEQ ID NO.: 15 or residues 29 to 1013 of SEQ ID NO.: 16.
50. (New) The method of claim 48, wherein said HMW protein is obtained using plasmid pAH342 obtainable from *E.coli* BL21 (pAH342) assigned ATCC accession number 98538.
51. (New) A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, said HMW protein encoded by a nucleic acid comprising a nucleotide

sequence of SEQ ID NO.: 1, 23 or 24, wherein the *Chlamydia* species is *Chlamydia trachomatis*, *Chlamydia pecorum*, *Chlamydia psittaci* or *Chlamydia pneumoniae*.

CII  
Cont.  
52. (New) A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, wherein said HMW comprises an amino acid sequence of SEQ ID NO.: 2, 15 or 16.

53. (New) A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, wherein said HMW protein is obtained using plasmid pJJ701 obtainable from *E.coli* AR58 (pJJ701) assigned ATCC accession number PTA-4123.

54. (New) A method of producing an immune response in an animal, comprising administering to said animal, an effective amount of an antigenic composition, comprising a pharmaceutical carrier and an isolated recombinantly produced *Chlamydia* species HMW protein, wherein said HMW protein is encoded by a nucleic acid having a nucleotide sequence which hybridizes under conditions comprising 50% formamide and 37°C or 0.15 M NaCl and 70°C to a nucleotide sequence of SEQ ID NO.: 1, 23 or 24, or a sequence complementary thereto, and which HMW protein is recognized by an antibody that specifically binds to a peptide comprising an amino acid sequence of SEQ ID NO.: 2, 15 or 16.